

OIPE

RAW SEQUENCE LISTING

DATE: 06/19/2001

PATENT APPLICATION: US/09/870,113

TIME: 12:07:21

Input Set : A:\SEQLIST MSC 31.txt

Output Set: N:\CRF3\06192001\I870113.raw

ENTERED

4 <110> APPLICANT: Turner, C. Alexander Jr.
 5 Hilbun, Erin
 6 Potter, David
 8 <120> TITLE OF INVENTION: Novel Human Mitochondrial Proteins and Polynucleotides

Encoding the
 9 Same

11 <130> FILE REFERENCE: LEX-0182-USA
 C--> 13 <140> CURRENT APPLICATION NUMBER: US/09/870,113
 C--> 13 <141> CURRENT FILING DATE: 2001-05-30
 13 <150> PRIOR APPLICATION NUMBER: US 60/207,933
 14 <151> PRIOR FILING DATE: 2000-05-30
 16 <160> NUMBER OF SEQ ID NOS: 12
 18 <170> SOFTWARE: FastSEQ for Windows Version 4.0
 20 <210> SEQ ID NO: 1
 21 <211> LENGTH: 1095
 22 <212> TYPE: DNA
 23 <213> ORGANISM: homo sapiens
 25 <400> SEQUENCE: 1

26	atggagttgg	agggg	cgggg	tgctggcggt	gtggcgggg	ggccggcggc	agggcccg	60
27	cgagccccg	gggagtcggc	gctgctggac	gggtggctgc	agcgggcgct	gggccccggg		120
28	gccggcgcg	gggagggccg	ggcctgcagg	cccccggtac	gacaagatcc	ggactccggc		180
29	ccggactacg	aggcgctgcc	ggctggagcc	actgtcacca	cgcacatggt	ggcaggcgcc		240
30	gtggcaggga	tcctggagca	ctgcgtgatg	taccccatcg	actgcgtcaa	gacccggatg		300
31	cagagtctac	agcctgaccc	agctgcccgc	tatcgcaatg	tggtggaggc	cctctggagg		360
32	attataagaa	cggagggcct	atggaggccc	atgagggggc	tgaacgtcac	agcaacaggc		420
33	gcagggcctg	cccacgccc	ttattttgcc	tgctacgaaa	agttaaaaaa	gacattgagt		480
34	gatgtaatcc	accctggggg	caatagccat	attgccaatg	gtgcggccgg	gtgtgtggca		540
35	acattacttc	atgatgcagc	catgaaccct	gcggaagtgg	tcaagcagag	gatgcagatg		600
36	tacaactcac	cataccaccg	ggtgacagac	tgtgtacggg	cagtgtggca	aaatgaaggg		660
37	gccggggcct	tttaccgcag	ctacaccacc	cagctgacca	tgaacgttcc	tttccaagcc		720
38	attcacttca	tgacctatga	attcctgcag	gagcacttta	acccccagag	acggtacaac		780
39	ccaagctccc	acgtcctctc	tggagcttgc	gcaggagctg	tagctgccgc	agccacaacc		840
40	ccactggacg	tttgcaaaac	actgctcaac	accaggagt	ccttggtttt	gaactcacac		900
41	attacaggac	atatcacagg	catggctagt	gccttcagga	cggtatatca	agtaggtggg		960
42	gtgaccgcct	atttccgagg	ggtgcaggcc	agagtaattt	accagatccc	ctccacagcc		1020
43	atcgcatggt	ctgtgtatga	gtttcttcaa	tacctaata	ctaaaaggca	agaagagtgg		1080
44	agggtggca	agtga						1095

46 <210> SEQ ID NO: 2
 47 <211> LENGTH: 364
 48 <212> TYPE: PRT
 49 <213> ORGANISM: homo sapiens
 51 <400> SEQUENCE: 2

52	Met	Glu	Leu	Glu	Gly	Arg	Gly	Ala	Gly	Gly	Val	Ala	Gly	Gly	Pro	Ala
53	1				5						10				15	
54	Ala	Gly	Pro	Gly	Arg	Ser	Pro	Gly	Glu	Ser	Ala	Leu	Leu	Asp	Gly	Trp
55				20					25					30		
56	Leu	Gln	Arg	Gly	Val	Gly	Arg	Gly	Ala	Gly	Gly	Gly	Glu	Ala	Gly	Ala
57				35					40					45		

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/870,113

DATE: 06/19/2001

TIME: 12:07:21

Input Set : A:\SEQLIST MSC 31.txt

Output Set: N:\CRF3\06192001\I870113.raw

```

58 Cys Arg Pro Pro Val Arg Gln Asp Pro Asp Ser Gly Pro Asp Tyr Glu
59      50                      55                      60
60 Ala Leu Pro Ala Gly Ala Thr Val Thr Thr His Met Val Ala Gly Ala
61 65                      70                      75                      80
62 Val Ala Gly Ile Leu Glu His Cys Val Met Tyr Pro Ile Asp Cys Val
63                      85                      90                      95
64 Lys Thr Arg Met Gln Ser Leu Gln Pro Asp Pro Ala Ala Arg Tyr Arg
65                      100                      105                      110
66 Asn Val Leu Glu Ala Leu Trp Arg Ile Ile Arg Thr Glu Gly Leu Trp
67                      115                      120                      125
68 Arg Pro Met Arg Gly Leu Asn Val Thr Ala Thr Gly Ala Gly Pro Ala
69                      130                      135                      140
70 His Ala Leu Tyr Phe Ala Cys Tyr Glu Lys Leu Lys Lys Thr Leu Ser
71 145                      150                      155                      160
72 Asp Val Ile His Pro Gly Gly Asn Ser His Ile Ala Asn Gly Ala Ala
73                      165                      170                      175
74 Gly Cys Val Ala Thr Leu Leu His Asp Ala Ala Met Asn Pro Ala Glu
75                      180                      185                      190
76 Val Val Lys Gln Arg Met Gln Met Tyr Asn Ser Pro Tyr His Arg Val
77                      195                      200                      205
78 Thr Asp Cys Val Arg Ala Val Trp Gln Asn Glu Gly Ala Gly Ala Phe
79                      210                      215                      220
80 Tyr Arg Ser Tyr Thr Thr Gln Leu Thr Met Asn Val Pro Phe Gln Ala
81 225                      230                      235                      240
82 Ile His Phe Met Thr Tyr Glu Phe Leu Gln Glu His Phe Asn Pro Gln
83                      245                      250                      255
84 Arg Arg Tyr Asn Pro Ser Ser His Val Leu Ser Gly Ala Cys Ala Gly
85                      260                      265                      270
86 Ala Val Ala Ala Ala Ala Thr Thr Pro Leu Asp Val Cys Lys Thr Leu
87                      275                      280                      285
88 Leu Asn Thr Gln Glu Ser Leu Ala Leu Asn Ser His Ile Thr Gly His
89                      290                      295                      300
90 Ile Thr Gly Met Ala Ser Ala Phe Arg Thr Val Tyr Gln Val Gly Gly
91 305                      310                      315                      320
92 Val Thr Ala Tyr Phe Arg Gly Val Gln Ala Arg Val Ile Tyr Gln Ile
93                      325                      330                      335
94 Pro Ser Thr Ala Ile Ala Trp Ser Val Tyr Glu Phe Phe Lys Tyr Leu
95                      340                      345                      350
96 Ile Thr Lys Arg Gln Glu Glu Trp Arg Ala Gly Lys
97                      355                      360
99 <210> SEQ ID NO: 3
100 <211> LENGTH: 582
101 <212> TYPE: DNA
102 <213> ORGANISM: homo sapiens
104 <400> SEQUENCE: 3
105 atggagtttg aggggcgggg tgctggcggt gtggcggggg ggccggcggc agggcccggg      60
106 cggagccccg gggagtcggc gctgctggac gggtagctgc agcggggcgt gggccggggg      120
107 gccggcgggc gggaggccgg ggctgcagg ccccggtac gacaagatcc ggactccggc      180
108 ccggactacg aggcgctgcc ggctggagcc actgtcacca cgcacatggt ggcaggcgcc      240

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/870,113

DATE: 06/19/2001

TIME: 12:07:21

Input Set : A:\SEQLIST MSC 31.txt

Output Set: N:\CRF3\06192001\I870113.raw

```

109 gtggcaggga tcctggagca ctgctgatg taccatcg actgctcaa gaccggatg 300
110 cagagtctac agcctgaccc agctgccgc tctgcaatg tgttgaggc cctctggagg 360
111 attataagaa cggaggccct atggaggccc atgaggggc tgaacgtcac agcaacaggc 420
112 gcagggcctg cccacgccct ttattttgcc tgctacgaaa agttaaaaaa gacattgagt 480
113 gatgtaatcc accctggggg caatagccat attgccaatg gtgcggccgg gtgtgtggca 540
114 acattacttc atgatgcagc catgaaccct gcggaaggct ga 582

```

116 <210> SEQ ID NO: 4

117 <211> LENGTH: 193

118 <212> TYPE: PRT

119 <213> ORGANISM: homo sapiens

121 <400> SEQUENCE: 4

```

122 Met Glu Leu Glu Gly Arg Gly Ala Gly Val Ala Gly Gly Pro Ala
123 1 5 10 15
124 Ala Gly Pro Gly Arg Ser Pro Gly Glu Ser Ala Leu Leu Asp Gly Trp
125 20 25 30
126 Leu Gln Arg Gly Val Gly Arg Gly Ala Gly Gly Gly Glu Ala Gly Ala
127 35 40 45
128 Cys Arg Pro Pro Val Arg Gln Asp Pro Asp Ser Gly Pro Asp Tyr Glu
129 50 55 60
130 Ala Leu Pro Ala Gly Ala Thr Val Thr Thr His Met Val Ala Gly Ala
131 65 70 75 80
132 Val Ala Gly Ile Leu Glu His Cys Val Met Tyr Pro Ile Asp Cys Val
133 85 90 95
134 Lys Thr Arg Met Gln Ser Leu Gln Pro Asp Pro Ala Ala Arg Tyr Arg
135 100 105 110
136 Asn Val Leu Glu Ala Leu Trp Arg Ile Ile Arg Thr Glu Gly Leu Trp
137 115 120 125
138 Arg Pro Met Arg Gly Leu Asn Val Thr Ala Thr Gly Ala Gly Pro Ala
139 130 135 140
140 His Ala Leu Tyr Phe Ala Cys Tyr Glu Lys Leu Lys Lys Thr Leu Ser
141 145 150 155 160
142 Asp Val Ile His Pro Gly Gly Asn Ser His Ile Ala Asn Gly Ala Ala
143 165 170 175
144 Gly Cys Val Ala Thr Leu Leu His Asp Ala Ala Met Asn Pro Ala Glu
145 180 185 190
146 Gly

```

149 <210> SEQ ID NO: 5

150 <211> LENGTH: 693

151 <212> TYPE: DNA

152 <213> ORGANISM: homo sapiens

154 <400> SEQUENCE: 5

```

155 atggagttgg aggggagggg tgctggcggg gtggcggggg ggccggcggc agggccggg 60
156 cggagccccg gggagtcggc gctgctggac ggtggtgctg agcggggcgt gggccggggg 120
157 gccggcggcg gggaggccgg ggctgcagg ccccggtac gacaagatcc ggactccggc 180
158 ccggactacg aggcgctgcc ggctggagcc actgtcacca cgcacatggt ggcaggcgcc 240
159 gtggcaggga tcctggagca ctgctgatg taccatcg actgctcaa gaccggatg 300
160 cagagtctac agcctgaccc agctgccgc tctgcaatg tgttgaggc cctctggagg 360
161 attataagaa cggaggccct atggaggccc atgaggggc tgaacgtcac agcaacaggc 420
162 gcagggcctg cccacgccct ttattttgcc tgctacgaaa agttaaaaaa gacattgagt 480

```

RAW SEQUENCE LISTING

DATE: 06/19/2001

PATENT APPLICATION: US/09/870,113

TIME: 12:07:21

Input Set : A:\SEQLIST MSC 31.txt

Output Set: N:\CRF3\06192001\I870113.raw

```

163 gatgtaatcc accctggggg caatagccat attgccaatg gtgcggccgg gtgtgtggca      540
164 acattacttc atgatgcagc catgaacctc gcggaaggta atgattcctc aacctatcac      600
165 tctgtgggca gctgcacctg tatttcttta cagtttgcag aagaaagcac atcagttttg      660
166 gtgggaaatt ctgttacctt gttttaccac tag                                     693
168 <210> SEQ ID NO: 6
169 <211> LENGTH: 230
170 <212> TYPE: PRT
171 <213> ORGANISM: homo sapiens
173 <400> SEQUENCE: 6
174 Met Glu Leu Glu Gly Arg Gly Ala Gly Gly Val Ala Gly Gly Pro Ala
175 1 5 10 15
176 Ala Gly Pro Gly Arg Ser Pro Gly Glu Ser Ala Leu Leu Asp Gly Trp
177 20 25 30
178 Leu Gln Arg Gly Val Gly Arg Gly Ala Gly Gly Gly Glu Ala Gly Ala
179 35 40 45
180 Cys Arg Pro Pro Val Arg Gln Asp Pro Asp Ser Gly Pro Asp Tyr Glu
181 50 55 60
182 Ala Leu Pro Ala Gly Ala Thr Val Thr Thr His Met Val Ala Gly Ala
183 65 70 75 80
184 Val Ala Gly Ile Leu Glu His Cys Val Met Tyr Pro Ile Asp Cys Val
185 85 90 95
186 Lys Thr Arg Met Gln Ser Leu Gln Pro Asp Pro Ala Ala Arg Tyr Arg
187 100 105 110
188 Asn Val Leu Glu Ala Leu Trp Arg Ile Ile Arg Thr Glu Gly Leu Trp
189 115 120 125
190 Arg Pro Met Arg Gly Leu Asn Val Thr Ala Thr Gly Ala Gly Pro Ala
191 130 135 140
192 His Ala Leu Tyr Phe Ala Cys Tyr Glu Lys Leu Lys Lys Thr Leu Ser
193 145 150 155 160
194 Asp Val Ile His Pro Gly Gly Asn Ser His Ile Ala Asn Gly Ala Ala
195 165 170 175
196 Gly Cys Val Ala Thr Leu Leu His Asp Ala Ala Met Asn Pro Ala Glu
197 180 185 190
198 Gly Asn Asp Ser Ser Thr Tyr His Ser Val Gly Ser Cys Thr Cys Ile
199 195 200 205
200 Ser Leu Gln Phe Ala Glu Glu Ser Thr Ser Val Leu Val Gly Asn Ser
201 210 215 220
202 Val Thr Leu Phe Tyr His
203 225 230
205 <210> SEQ ID NO: 7
206 <211> LENGTH: 798
207 <212> TYPE: DNA
208 <213> ORGANISM: homo sapiens
210 <400> SEQUENCE: 7
211 atgcagagtc tacagcctga cccagctgcc cgctatcgca atgtgttggg gccctctgg      60
212 aggattataa gaacggaggg cctatggagg cccatgaggg ggctgaacgt cacagcaaca      120
213 ggcgcagggc ctgccacgc cctttatttt gcctgctacg aaaagttaaa aaagacattg      180
214 agtgatgtaa tccaccctgg gggcaatagc catattgccg atggtgcggc cgggtgtgtg      240
215 gcaacattac ttcatgatgc agccatgaac cctgcggaag tggtaagca gaggatgcag      300

```

RAW SEQUENCE LISTING

DATE: 06/19/2001

PATENT APPLICATION: US/09/870,113

TIME: 12:07:21

Input Set : A:\SEQLIST MSC 31.txt

Output Set: N:\CRF3\06192001\I870113.raw

```

216 atgtacaact caccatacca cggggtgaca gactgtgtac gggcagtgtg gcaaaatgaa      360
217 ggggccgggg ccttttaccg cagctacacc acccagctga ccatgaacgt tcctttccaa      420
218 gccattcact tcatgaccta tgaattcctg caggagcact ttaaccccca gagacggtac      480
219 aacccaagct cccacgtcct ctctggagct tgcgcaggag ctgtagctgc cgcagccaca      540
220 accccactgg acgtttgcaa aacactgctc aacacccagg agtccttggc tttgaactca      600
221 cacattacag gacatatcac aggcattggt agtgccttca ggacggtata tcaagtaggt      660
222 ggggtgaccg cctatttccg aggggtgcag gccagagtaa tttaccagat cccctccaca      720
223 gccatcgcat ggtctgtgta tgagttcttc aaatacctaa tcactaaaag gcaagaagag      780
224 tggagggctg gcaagtga                                     798
226 <210> SEQ ID NO: 8
227 <211> LENGTH: 265
228 <212> TYPE: PRT
229 <213> ORGANISM: homo sapiens
231 <400> SEQUENCE: 8
232 Met Gln Ser Leu Gln Pro Asp Pro Ala Ala Arg Tyr Arg Asn Val Leu
233 1 5 10 15
234 Glu Ala Leu Trp Arg Ile Ile Arg Thr Glu Gly Leu Trp Arg Pro Met
235 20 25 30
236 Arg Gly Leu Asn Val Thr Ala Thr Gly Ala Gly Pro Ala His Ala Leu
237 35 40 45
238 Tyr Phe Ala Cys Tyr Glu Lys Leu Lys Lys Thr Leu Ser Asp Val Ile
239 50 55 60
240 His Pro Gly Gly Asn Ser His Ile Ala Asn Gly Ala Ala Gly Cys Val
241 65 70 75 80
242 Ala Thr Leu Leu His Asp Ala Ala Met Asn Pro Ala Glu Val Val Lys
243 85 90 95
244 Gln Arg Met Gln Met Tyr Asn Ser Pro Tyr His Arg Val Thr Asp Cys
245 100 105 110
246 Val Arg Ala Val Trp Gln Asn Glu Gly Ala Gly Ala Phe Tyr Arg Ser
247 115 120 125
248 Tyr Thr Thr Gln Leu Thr Met Asn Val Pro Phe Gln Ala Ile His Phe
249 130 135 140
250 Met Thr Tyr Glu Phe Leu Gln Glu His Phe Asn Pro Gln Arg Arg Tyr
251 145 150 155 160
252 Asn Pro Ser Ser His Val Leu Ser Gly Ala Cys Ala Gly Ala Val Ala
253 165 170 175
254 Ala Ala Ala Thr Thr Pro Leu Asp Val Cys Lys Thr Leu Leu Asn Thr
255 180 185 190
256 Gln Glu Ser Leu Ala Leu Asn Ser His Ile Thr Gly His Ile Thr Gly
257 195 200 205
258 Met Ala Ser Ala Phe Arg Thr Val Tyr Gln Val Gly Gly Val Thr Ala
259 210 215 220
260 Tyr Phe Arg Gly Val Gln Ala Arg Val Ile Tyr Gln Ile Pro Ser Thr
261 225 230 235 240
262 Ala Ile Ala Trp Ser Val Tyr Glu Phe Phe Lys Tyr Leu Ile Thr Lys
263 245 250 255
264 Arg Gln Glu Glu Trp Arg Ala Gly Lys
265 260 265
267 <210> SEQ ID NO: 9

```

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/870,113

DATE: 06/19/2001

TIME: 12:07:22

Input Set : A:\SEQLIST MSC 31.txt

Output Set: N:\CRF3\06192001\I870113.raw

L:13 M:270 C: Current Application Number differs, Replaced Current Application No

L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date